

Galvanic Cells

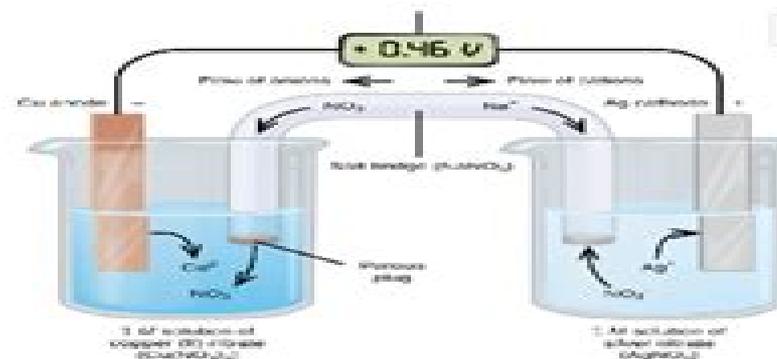
1. Introduction

Aim : The aim of this experiment is to measure the electric potential of a galvanic cell and compare it with the actual potential.

Galvanic cells are electrochemical cells in which electricity generates spontaneous oxidation reduction processes, commonly known as voltaic cells. When drafting the equations, oxidation - reduction reactions are typically separated into half-reactions to enable the entire equation to be balanced and to stress the actual chemical transitions. Oxidation is the loss of electrons or an increase in the oxidation number of an atom. Reduction is the gain of electrons or a decrease in the oxidation number of an atom.

The cell is made up of two half cells. The half cell shown at the left of the figure contains copper in an aqueous solution of copper nitrate. The half cell on the right contains silver ions in an aqueous solution of silver nitrate. A tube containing an inert electrolyte solution, known as a **salt bridge** is used to separate the two half cells. The electrodes in an electrochemical cell are called the cathode and anode. They are made of a solid metal and are submerged into a solution of the electrodes' ion called the electrolyte. For example, in Figure 1 since the electrode is made up of copper, the electrolyte is in a solution of an Cu^{2+} ions. **The anode** is where the oxidation occurs. It is always drawn on the left. **The cathode** is where the reduction takes place. It is always drawn on the right. An external conductor is connected to both the electrodes which completes the circuit.

FIGURE 1. Schematics of a galvanic cell.



As oxidation takes place in the anode, Zn oxidises and turns into Zn^{2+}

Galvanic Cell Lab Report

Jin-Ying Zhang



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than 200 participants from 40 countries the conference featured 140 oral and 50 poster presentations th Participants of the 20 ICCE were invited to submit full papers and the latter were subjected to peer review The selected accepted papers are collected in this book of proceedings This book of proceedings encloses 39 presentations covering topics ranging from fundamental to applied chemistry such as Arts and Chemistry Education Biochemistry and Biotechnology Chemical Education for Development Chemistry at Secondary Level Chemistry at Tertiary Level Chemistry Teacher Education Chemistry and Society Chemistry Olympiad Context Oriented Chemistry ICT and Chemistry Education Green Chemistry Micro Scale Chemistry Modern Technologies in Chemistry Education Network for Chemistry and Chemical Engineering Education Public Understanding of Chemistry Research in Chemistry Education and Science Education at Elementary Level We would like to thank those who submitted the full papers and the reviewers for their timely help in assessing the papers for publication th We would also like to pay a special tribute to all the sponsors of the 20 ICCE and in particular the Tertiary Education Commission <http://tec.intnet.mu> and the Organisation for the Prohibition of Chemical Weapons <http://www.opcw.org> for kindly agreeing to fund the publication of these proceedings

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